

REMARKS

Claims 1-58 are pending in the application.

Claims 1-8, 10-14, 16, and 18-40 have been rejected. Although not so indicated on the Office Action Summary, Claims 9, 42-45, 47-52, and 54-57 also have been rejected per the substance of the Office Action.

Claims 15, 17, 41, 46, 53, and 58 have been objected to.

Claim 39 has been amended.

Amendments to portions of the Specification have been proposed. These amendments correct either typographical errors within the cited sections or are responsive to objections raised in the Office Action. Applicants submit that none of these amendments to the Specification constitute an addition of new matter to the application.

Applicants note that the Office Action Summary indicates that the drawings filed on May 31, 2000 are objected to. However, there is no indication as to the substance of the objection. Without further guidance from the Examiner, Applicants cannot provide revised drawings at this time.

Applicants thank the Examiner for the indication that objected to Claims 7, 15, 17, 41, 46, 53, and 58 would be allowable if rewritten in independent form. At the present time, Applicants do not choose to so rewrite the claims, but reserve the right to do so at a later date.

Rejection of Claims under 35 U.S.C. § 112

Claims 1-4, 10-12, 18-21, 25-27 and 31-38 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctively claim the subject matter which Applicants regard as the invention.

Claims 1-4, 10-12, 18-21 and 25-27 have been rejected for the stated reason that “it is unclear how a buffer status (which is an attribute of the buffer) has anything to do with a transport gap (which described an overhead portion of a frame structure, of which overhead data is not entered into the buffer),” and that therefore “the word ‘keying’ (or ‘identifying’, as suggested by the Applicant in a remark in response to the previous Office Action) is indefinite because the relationship between the buffer status and the transport gap (i.e., the buffer status and the transport gap) has not been properly defined in the claims.” The Office Action expounds upon this rejection by stating that “the claim language ‘keying a buffer status to a transport gap other than a standard SONET transport gap’ does not solve the problem; it is simply a part of the problem statement because there is no steps involved in solving the difficulties and determining the almost full and almost empty buffer statuses....”

Applicants respectfully submit that the above rejection may be due to a misinterpretation of the use of the word “keying” in the listed claims. Applicants have therefore revised the Specification to clarify both the appropriate interpretation of the word “keying” (*see* Amendment to first paragraph on page 5) as well as the relationship between the characteristics of the chosen SONET frame and the “almost full” and “almost empty” buffer statuses (*see* Amendments to first full paragraph on page 9 and final paragraph on page 10).

The relationship between the buffer status and the transport gap is well-established within the Specification, as is the use of the term “keying” to describe that relationship. *See, e.g.*, Specification, page 12, para. 2 (“the foregoing [pp. 4-12] has described how to determine almost empty and almost full status of FIFO buffers when such buffers are keyed to non-standard SONET frames”); Specification, page 5, para. 1 (“in one embodiment, a method includes but is not limited to keying a buffer status to a transport gap other than a standard transport gap period”). At least these portions of the Specification, along with the amended portions of the Specification, provide support for the link between buffer status and transport gap as presented in the claims. Further, these portions of the Specification and the amended portions of the Specification establish that the claim language does more than reiterate “a part of the problem statement”, as suggested in the Office Action. Applicants respectfully submit that the term “keying” as established by the Specification provides resolution to the problem by the present invention.

Additionally, Applicants respectfully submit that the passage of the Specification to which the Office Action makes reference as support for this rejection is misplaced.

The Office Action sites to the second paragraph on page 4 for the statement:

It has been discovered by the inventors, and such discovery forms part of the inventive content herein, that if either pointer interpreter 102 or pointer generator 106 is keyed to a non-standard SONET frame format ... severe difficulties arise with respect to determining the almost empty and almost full buffer conditions, which consequently give rise to difficulties in performing appropriate negative and/or positive stuffing.

The Office Action is correct in stating that this is the problem statement: that is, keying (or associating) the pointer interpreter or pointer generator with a non-standard frame

format raises difficulties with respect to determining almost empty and almost full buffer conditions. However, the language in the rejected claims relates to keying a buffer status to a transport gap of the non-standard SONET frame. The subject and objects of the term “keying” within this claim are clearly not the same as those involved in the problem statement, and instead present the solution to the presented problem.

For the above reasons, Applicants submit that the rejections under 35 U.S.C. § 112 paragraph 2 as to Claims 1-4, 10-12, 18-21, and 25-27 have been responded to and traversed, and therefore request that those some rejections be reconsidered and withdrawn.

The Office Action rejects Claims 31-38, stating that it is unclear as to what the phrase “the number of columns” stands for. Independent Claim 31 is written:

A SONET node comprising:

at least one pointer interpreter having an almost full buffer detector set substantially equal to a number of columns present in a non-standard SONET transport gap.

The Office Action remarks that “there are various ways of defining the ‘almost full’ status as defined in the Specification (e.g., an almost full could mean at least n empty slots from complete full or at least n occupied slots in the buffer.)”

Applicants respectfully submit that the Specification establishes that an “almost full” condition for a pointer interpreter is a number of columns away from being full. *See* page 9, para. 2; page 10, para. 1; page 11, para. 3. Thus, the relationship between the “almost full buffer detector” and “a number of columns” has an established meaning through the Specification. Thus, the meaning of this term used in the claims is apparent

from the Specification and drawings at the time the application was filed. *See* MPEP 2173.05(a)

For the above reasons, Applicants respectfully submit that the Examiner's rejections of the above claims under 35 U.S.C. § 112 para. 2 have been responded to and traversed, and therefore request reconsideration and withdrawal of those rejections. Applicants further respectfully submit that the claims are in condition for allowance and Applicants respectfully request notification of same.

Rejection of Claims under 35 U.S.C. § 102

Claims 1-6, 8, 10-14, 16, and 18-30 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,628,651 issued to Ryan ("Ryan"). Applicants respectfully traverse this rejection.

Claim 1 of the present invention recites a limitation "keying a buffer status to a transport gap other than a standard SONET transport gap." The Ryan reference does not make any reference to such a link between buffer status and transport gap. Applicants further respectfully submit that the sections of Ryan cited in the Office Action make no reference to buffer status at all. Ryan merely relates a write pointer and a read pointer that sequentially count up or down to write to or read to data memory. Ryan, 6:30-54. This does not provide a buffer status as claimed in the present invention.

The Office Action posits that "Ryan's read/write buffers must be equipped with buffer statuses." Even accepting this position of the Office Action (which Applicants respectfully do not [*see above*]), there is no linkage made in the reference, nor presented

by the Office Action, between these buffer statuses and a non-standard SONET transport gap as claimed.

Further, Applicants submit that the Examiner has admitted that Ryan does not disclose the limitations of Claim 1. The Examiner states that “Ryan ... does not specifically teach flagging the buffers with almost full and almost empty statuses.” *See* Office Action (Jan. 6, 2004), page 10. This statement is clearly in reference to the status limitations of the claims, *i.e.*, “a buffer status” (Claims 1, 18), “transmit buffer status” (Claims 2, 4, 19, 21), and “receive buffer status” (Claims 10, 12, 25, 27). Without such a teaching, Ryan cannot be said to present a method that specifically relates to determining buffer status.

For at least the reasons stated above, Applicants respectfully submit that independent Claim 1 and dependent Claims 2-6, 8, 10-14, 16, and 18-30 are allowable over Ryan.

Claim 39 stands rejected under 35 U.S.C. §102(e) as being anticipated by AAPA [Applicant Admitted Prior Art]. Applicants have amended this claim to traverse the rejection.

Claims 39-40 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,717, 693 issued to Baydar et al. (“Baydar”). Claim 39, as amended, requires “detecting a transition involving at least one non-standard SONET frame.” Applicants respectfully submit that the cited sections of Baydar do not relate to detecting frame transitions or to using that information to engage in stuffing operations, as is claimed. Applicants are unable to find within Baydar anything related to a relationship between frame transition and stuffing.

As to dependent Claim 40, Applicants further submit that the referenced sections fail to disclose the treatment of non-standard SONET frames. The VT structures that are referenced in the Office Action are actually found within a standard SONET frame. *See* Baydar, col. 3:5-15 (describing how the virtual tributaries (VT) are mapped into the STS payload in order to facilitate the transport of lower-rate digital signals). For at least the reasons stated above, showing that Baydar does not include every limitation of Claims 39-40, Applicants respectfully submit that independent Claim 39 and dependent Claim 40 are allowable over Baydar.

Rejection of Claims under 35 U.S.C. § 103

Claims 9, 31-38, 42-45, 47-52, and 54-55 stand rejected under 35 U.S.C. §103(a) as being anticipated by Baydar further in view of Ryan. Applicants respectfully traverse this rejection.

In order for a claim to be rendered invalid under 35 U.S.C. § 103, the subject matter of the claim as a whole would have to be obvious to a person of ordinary skill in the art at the time the invention was made. *See* 35 U.S.C. § 103(a). This requires: (1) the reference(s) must teach or suggest all of the claim limitations; (2) there must be some teaching, suggestion or motivation to combine references either in the references themselves or in the knowledge of the art; and (3) there must be a reasonable expectation of success. *See* MPEP 2143; MPEP 2143.03; *In re Rouffet*, 149 F.3d 1350, 1355-56 (Fed. Cir. 1998).

Applicants submit that Claims 9, 31-38, 42-45, 47-52, and 54-57 are allowable over these patents because neither of these references, alone or in combination teach all of the limitations of the rejected claims.

Claim 9. Claim 9 is dependent upon Claim 1. As noted, Ryan fails to disclose the limitations of Claim 1 upon which Claim 9 is dependent. Applicants submit that Baydar does not teach these limitations either, as the referenced sections of Baydar do not disclose keying buffer status to non-standard SONET transport gaps, as discussed in the previous section.

Claims 31-38, 42-45, 47-52, and 54-57. The Office Action rejects these claims “for the same reasons set forth in the rejections of claims 1-6, 8-9, 10-14, 16, 18-30, and 39-40 above.” Claims 1-6, 8, 10-14, 16, 18-30 are rejected as anticipated by Ryan. Claims 39-40 are rejected as anticipated by Baydar. For the reasons stated above, those claims are not anticipated by the references, and therefore Applicants respectfully submit that the present claims are similarly allowable. Additionally, Applicants respectfully submit that for the reasons stated below, the specific claims are in condition for allowance.

Independent Claim 31 contains a limitation requiring:

at least one pointer interpreter having an almost full buffer
detector set substantially equal to a number of columns
present in a non-standard SONET transport gap

and independent Claim 35 contains a similar limitation requiring:

at least one pointer generator having an almost empty
buffer detector set substantially equal to a number of
columns present in a non-standard SONET transport gap.

The Office Action does not present argument or rationale showing the presence of these limitations in the Ryan or Baydar references, alone or in combination. The burden is on the Examiner to support a case of obviousness, including whether the prior art references teach or suggest all of the claim limitations. *See* MPEP 706.02(j). Applicants further submit that, for the reasons presented above, neither Ryan nor Baydar, alone or in combination, teaches these limitations of Claims 31 and 35.

Claims 42-43 are dependent upon Claim 39. As stated in the previous section, Baydar fails to disclose the stated limitations of Claim 39. Applicants submit that the referenced sections of Ryan do not teach these limitations either, having no disclosure of detecting a transition involving at least one SONET frame, nor engaging in stuffing operations in responses to such a detection. Further, the Office Action does not present any specific argument or rationale showing the presence of these limitations in Ryan or Baydar, alone or in combination.

Claims 45 and 47-48 are dependent upon independent Claim 44. Similar to independent Claim 39, amended Claim 44 contains a limitation requiring a “means for detecting a transition involving at least one non-standard SONET frame” along with additional limitations requiring means that are responsive to the “means for detecting.” As Applicants assert above for Claim 39, Baydar does not disclose such a means for detecting a transition, nor does the Office Action suggest that Ryan contains disclosure that remedies this deficiency.

Claims 49 and 54 are independent claims, Claims 50-52 are dependent upon Claim 49, and Claims 55-57 are dependent upon Claim 54. As with Claims 39 and 44, these claims include a limitation directed toward “detecting a transition involving at least

one SONET frame” or a “means for detecting a transition involving at least one SONET frame.” As discussed above, Applicants submit that neither Ryan nor Baydar, alone or in combination, teach this limitation.

For the foregoing reasons, Applicants respectfully submit that neither the Ryan nor Baydar references, alone or in combination, teach the limitations of the listed claims and therefore Applicants submit that these claims are allowable.

In addition, Applicants also respectfully submit that the Examiner has not met the Examiner’s burden of factually supporting the alleged motivation to combine the two references. The Examiner’s duty may not be satisfied by engaging in impermissible hindsight; any conclusion of obviousness must be reached on the basis of facts gleaned from the references. The Examiner must therefore provide evidence to suggest the combination and “[b]road conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence.’” *See In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). The Applicants respectfully submit that the particular parts of the cited references that the Examiner has relied upon and the pertinence of each reference has not been clearly explained, especially with regard to the motivation to combine references in support of the rejection of claims in the first full paragraph on page 11 of the Office Action. Further, the Office action does not establish that such a combination of the teachings of these references would meet with success, as required.

While the Office Action states that “the combination of Baydar’s and Ryan’s teachings would yield the invention as claimed...”, it fails to state where in those references is found the motivation to combine them; that is, why would a person of ordinary skill want to make this combination? Ryan fails to note any need for the elastic

store technique of Baydar to convert signals from line rates to local rates. Instead, Ryan uses time-space switching elements coupled with a conversion of the frame format. *See, e.g.,* Ryan 3:53-65; Ryan 8:24-31 (indicating that no buffering occurs using the Ryan time-space switches, which is fundamentally different from the Baydar elastic store [a buffer]). Further, Baydar provides no indication of a desire to rearrange the frame as taught by Ryan, and there is no evidence that Baydar would function with such a rearrangement. Ryan restructures the frames in order to reduce throughput delay for various internal VT payload sizes. *See, e.g.,* Ryan 9:49-55. On the other hand, Baydar envisions a method of STS and VT pointer processing of standard SONET packets. *See, e.g.,* Baydar 3:56-65. Even were the references combined in such a way that the synchronized payload of Baydar was rearranged according to Ryan, then the presently claimed invention would still not be used as Baydar's buffer status would not know of Ryan's rearranged frame.

The Office Action further states that "the only requirement from Ryan is that Ryan's system demonstrated symmetry in the structure of receive and transmit buffers." But the current arguments presented in the Office Action place heavier emphasis on Ryan. *See* Office Action, ¶ 20 ("[the claims] are rejected for the same reasons set forth in the rejection of claims 1-6, 8-9, 10-14, 16, 18-30, and 39-40 above). This heavier emphasis on Ryan requires an even greater finding on the part of the Examiner to show motivation to combine.

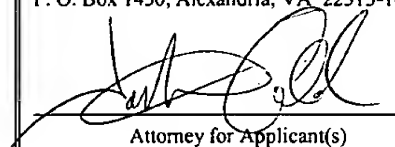
For these additional reasons, Applicants respectfully submit that the Office Action fails to support the 35 U.S.C. § 103(a) rejection and therefore these claims are allowable.

* * *

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5090.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop AF, COMMISSIONER FOR PATENTS, P. O. Box 1450, Alexandria, VA 22313-1450, on July 19, 2004.

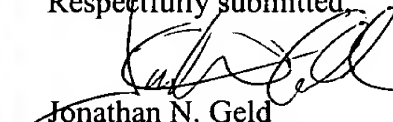


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7/19/2004

Date of Signature

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